

Work Order ID 146270

Monday, May 16, 2016 10:31:27 AM

146270

Page 1

Item ID: D2011-101

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Mirror 6"

Stop ***NS2***

Start Date: 5/19/2016 Start Qty: 20.00

20

Cust Item ID:

Required Date: 5/30/2016 Req'd Qty: 20.00

20

Customer:

Reference:

Approvals: Process Plan: MLS

Date: **MAY 16 2016** Tooling:

Date:

Run Start ***NR1***

QC:

Date: SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2011	Rev G

100

0.00

100

PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 32462 Mirror P/N: 28663 supplier: B C
INDUSTRIAL Material release note required

20

MAY 23 2016

DAS
13
9-89

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Memo

0.40

Packaging

Ensure material certification is attached

20x Sp/6-d6-2

120

QC6- Inspect dimensions to drawing

0.00

120

QC

Memo

0.00

Quality Control

(20)

DAS
38
9-89

JUN 08 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																											
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																								
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																							
Root Cause		FAULT CATEGORY																																																													
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
																								OTHER : ☐																																							

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Small Fab								
Small Fab	Memo	0.80							
Small Fab	1- Wrap mirror with plastic wrap								
	2- Discard Hardware & Install new hardware loosely								
	3- Crimp stud as per Dwg D2011								
140		0.00							
140	QC5- Inspect part completeness to step on W/O								
QC	Memo	0.40							
Quality Control	4- Test assembly to 50lbs pull test after 24 hours								
150		0.00							
150	Identify as per dwg & Stock Location: <u>336</u>								
Packaging	Memo	0.20							
Packaging									

DAS
36
9-89DAS
38
9-89
JUN 11 2016

20 JUN 13 2016

DAS
6
8-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause				FAULT CATEGORY			
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
				Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
				Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
				Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
				Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
				Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
				Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
				Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
				OTHER : _____			

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC21- Final Inspection - Work Order Release	0.00							
160									
QC	Memo	2.00							
Quality Control									

MCS

JUN 13 2016

MCS JUN 13 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY																																																											
Environment ☐	Design ☐	Doc/Data ☐	Equip/Tooling ☐	Handling/Pre ☐	Material ☐	Internal Transport ☐	Tribal Knowledge ☐	LOA ☐	Substation ☐	Past Expiry Date ☐	Misidentified ☐	No Re-verification ☐	Operator ☐	Offset/Setup ☐	Supplier ☐	Training ☐	Use for Testing ☐	Poor Information ☐	Rushing ☐	Product Improvement ☐	Process Improvement ☐	Manufacturing Process ☐	Past Due ☐	Pressure/Forced ☐	Bending ☐	Centre Not Concentric ☐	Cracks ☐	Crimp/Kink/Ripple/Wave ☐	Cuffs ☐	Crushing ☐	Heat Treat ☐	Wave/Twist in Tube ☐	Marks/Chatter ☐	Temperature/Cure ☐	Set-up ☐	BOM/Route ☐	Broken/Damage/Defect ☐	Inspection Incomplete/Unqualified ☐	Contamination ☐	Countersink ☐	Cut Too Short ☐	Instructions Incomplete/Unclear ☐	Drill Holes ☐	Power Loss/Surge ☐	Folio/Program ☐	Grain ☐	Weld ☐	Wrong Stock Pulled ☐	Out of Sequence ☐	Off-set ☐	Mislabeled ☐	Fit/Function ☐	Misaligned/off center ☐	Positioned Wrong ☐	Outside Dimensions ☐	Over/Under tolerance ☐	Part Incorrect ☐	Part Lost/Missing ☐	Part Moved ☐	Drawing ☐	Finish ☐	Misread ☐	Turning Sequence ☐
																								OTHER : ☐																																							

Picklist Print

Monday, May 16, 2016 10:31:34 AM

Page 1

Work Order ID: 146270

Parent Item: D2011-101

Parent Item Name: Mirror 6"

146270

D2011-101

Start Date: 5/19/2016

Required Date: 5/30/2016

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP: J04.09.15 Added Steps 5-7 KJ/JLM IPP:
K05.12.15 chg black sikaflex for white EC IPP L 08.11.06 new
drawing EC verify: DD IPP: M 08.12.19 Added step 3 KJ Verified
by: LL IPP rev N 10.01.13 added wrap per ncr09-118 EC verified by: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
NAS1149D0416J		Purchased	No			110	Each	4,208.000	1	20			
NAS1149D0416.1										**		16/06/08	DAS 36 9-89
WASHER													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				222					
				m131511				222		20			
				ST260a				1984					
				m131511				1984					
				ST264				2002					
				m131511				2002					
CHM-10601		Purchased	No			130	Each	0.0000	1	20			
CHM-10601										**		201 20/10-6-2	
Mirror 6"													
D2829 28663 JUN 13 2016													
D2829										**		16/06/08	DAS 36 9-89
Threaded Stud													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				GA				45					
				122346				45		20			
D3014-1		Manufactured	No			130	Each	170.0000	1	20			
D3014-1										**		16/06/08	DAS 36 9-89
Lock Nut													
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST015				170					
				122272				170		20			

DQA: _____ Date: _____

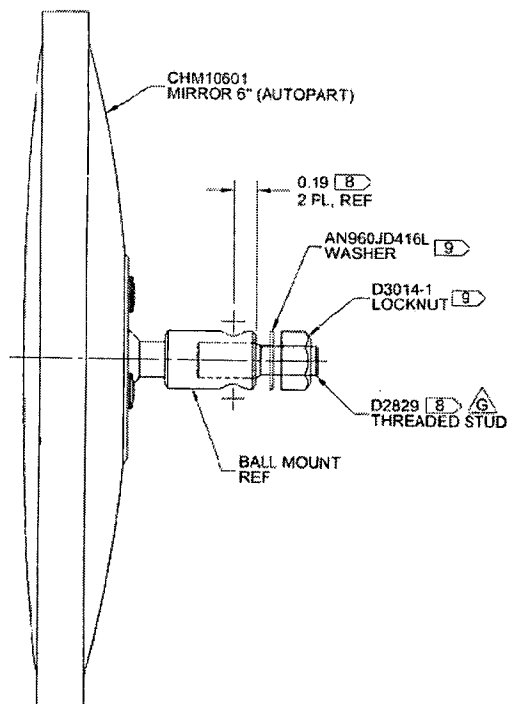


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

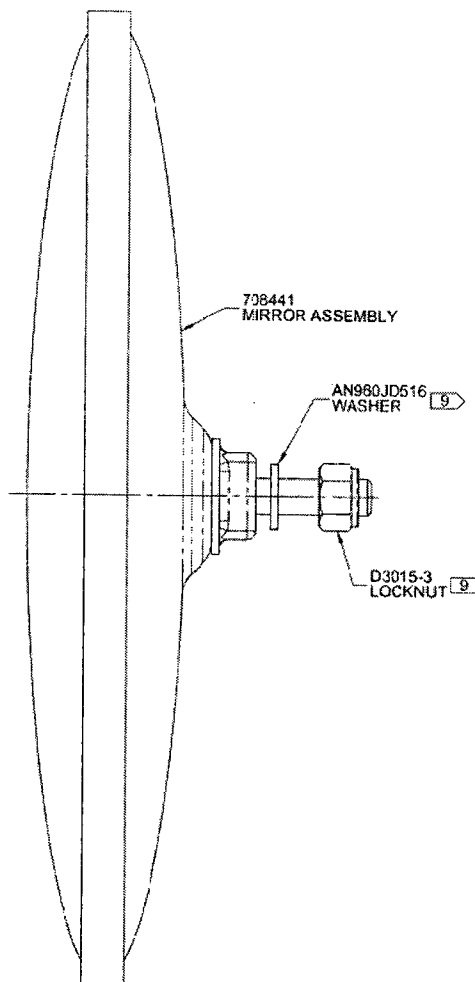
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause				FAULT CATEGORY					
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER :									



D2011-101 MIRROR ASSEMBLY 6"

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2011-101 = 0.6 lbs APPROX.; D2011-103 = 1.0 lbs APPROX.
- 8) D2829 INSTALLATION PROCEDURE:
 - APPLY LOCKTITE 262 TO $\phi 5/16$ END OF D2829
 - THREAD BY HAND INTO BALL MOUNT UNTIL ENTIRE $\phi 5/16$ END OF D2829 IS WITHIN BALL MOUNT
 - CRIMP BALL MOUNT ON TWO OPPOSING SIDES, 0.19 FROM END AS ILLUSTRATED USING TOOL DT8317
 - CRIMP TO DEPTH OF 0.040 ± 0.010 USING R0.125
- 9) INSTALL LOOSE



D2011-103 MIRROR ASSEMBLY 8"

ITEM	QTY -101	QTY -103	P/N	DESCRIPTION
1	X		D2011-101	MIRROR ASSEMBLY 6"
2		X	D2011-103	MIRROR ASSEMBLY 8"
3	1		D2829	THREADED STUD
4	1		D3014-1	LOCKNUT
5		1	D3015-3	LOCKNUT
6	1		CHM10601	MIRROR 6" (AUTOPART)
7		1	708441	MIRROR 8" (VELVAC)
8	1		AN960JD416L	WASHER
9		1	AN960JD516	WASHER

SEE COPY
RETURN TO
FACILITY
UNCONTROLLED COPY
SUBJECT TO A TENDMENT
WITHOUT NOTICE
WORK ORDER
146270 HLT
1605/6
RELEASED
08-10-2010

G	REDRAWN IN SOLIDWORKS TO CURRENT STANDARD AND TRANSFERRED TO "B" SIZE FORMAT. MIRROR 6" (AUTOPART) AND CHM10601 WERE MIRROR 6" (GROTE) AND P/N 28043 (ZN D3-1). ADDED D2829 (ZN D3-1 AND ZN D3-1). REMOVED DRILLING NOTE, VIEW A-A AND SIKAFLEX APPLICATION NOTE. REASON: GROTE PRODUCT IS DISCONTINUED	MB	08.10.06
F	ADD HOLES FOR SEALANT ON -101	CP	04.09.10
E	NEW 8" MIRROR	CP	01.05.08
D	NEW 6" MIRROR, ADD NUT, REMOVED STUD	CP	01.04.23
C	REPLACE DOMINION AUTO MIRRORS WITH PHILLIPS, ADDED STUDS, REDRAWN	RF	99.06.01
B	SIKAFLEX 241 ADDED	JB	98.04.09
A	DWG NO. WAS DSP1011, ADDED -103	JB	90.06.15
-	NEW ISSUE	JB	90.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN	JB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	JB		
CHECKED	JB	DRAWING NO.	REV G
MFG. APPR	JB	D2011	SHEET 1 OF 1
APPROVED	JB	TITLE	SCALE
DE APPR.	JB	MIRROR ASSEMBLY	NTS
DATE	08.10.06	COPYRIGHT © 1990 BY DART AEROSPACE LTD THIS DOCUMENT IS A PROPRIETARY DOCUMENT. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO32462

Purchase Order Date 5/24/2016 1:44:00 PM
PO Print Date 5/24/2016

Page Number 1 of 1

E-MAILED

MAY 24 2016

Order From : VC-BC1001
B C INDUSTRIAL
14 OLD FOREST
KIRKLAND, QUEBEC H9J 2Z8

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 514-585-8907

Ship To Contact
Ship To Phone
Ship Via: FedEx Economy collect
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
2	28663 AS PER DWG D2011 REV. G B146270	Mirror 6"	5/30/2016 Yes 5/30/2016	FN	20.00 Each	\$18.70	\$374.00
Line Total:							\$374.00
3	71401-45 Procurement Quality Clauses	PROCUREMENT QUALITY CLAUSES	5/30/2016 No 5/30/2016		1.00	\$0.00	\$0.00
Line Total:							\$0.00
PO Total:							\$374.00

Note: Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Change Nbr: 2

Change Date: 5/24/2016

DATE June 1 2016

Packing Slip

PS160601DA

Livrer a/Ship to:

Dart Aerospace
1270 Aberdeen Street
Hawkesbury, Ont
K6A 1K7

PO 32462

	Description	Livrer/ship	B/O
1.	Mirror 6" # 28663 ✓	20	0
2.			
3.			
4.			
5.			
6.			
7.			

Op/6-6-8.

BC Industrial..14 Old Forest..Kirkland..Quebec..H9J-2Z8
Phone 514-585-8907 bcpcl@videotron.ca

BC Industrial..... 14 Old Forest....Kirkland....Quebec....H9J-2Z8....Canada
Phone 514-585-8907 Email bcpc1@videotron.ca

Certificate of Compliance

June 1 2016

Dart Aerospace
1270 Aberdeen
Hawkesbury, Quebec
K6A-1K7

ATT: Chantal Lavoie

This is to confirm that the parts delivered on our PS 160601DA

Grote Mirror # 28663

conforms to the specifications outlined on your purchase
order 32462

Thank you

Bryan Cameron

#TPS/GST-142640622
#TVQ/PST-1021696907

Terms 2%10 Net 30